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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/780,696	02/19/2004	Hiroyuki Yoda	BJS-914-180	2027

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EXAMINER	
HALL, ASHA J	
ART UNIT	**PAPER NUMBER**
1795	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/780,696	YODA ET AL.	
	Examiner	Art Unit	
	ASHA HALL	1795	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 November 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *August 7,2007*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The information disclosure statement filed November 21, 2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the non-patent documents listed with a line through is not available to the public. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-4, and 6-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Umemoto et al. (JP2001-213915).

With respect to claim 1, Umemoto et al. discloses in Figure 2 and 4 a photovoltaic module subassembly comprising: a plurality of photovoltaic cells (1) arranged in an array (11) and electrically interconnected (9) as shown in Figure 4;

according to Figure 2, a translucent, first plate member (5) of resin adjacent to a light receiving surface of the plurality of photovoltaic cells (11); a second plate member (5) of resin adjacent to a non-light receiving surface of the plurality of photovoltaic cells (11) ; and a translucent filler layer (4) located between the first and second plate members (5) of resin to seal (31,32) the plurality of photovoltaic cells (11) (paragraph 38).

In regard to claims 2, 3, and 4, Umemoto et al. discloses the subassembly of claim 1 above, an further disclose the first plate member (5) of resin is a translucent film containing resin film containing polyethylene terephthalate (PET) of a fluorine system as a source material (paragraph 38).

With respect to claim 6, Umemoto et al. discloses the subassembly of claim 4 above, wherein at least one of the first and second plate members (5) of resin is an ultraviolet absorber/PET (UV absorber) (paragraph 38).

In regard to claim 7, Umemoto et al. discloses the subassembly of claim 1 above (Figure 3), wherein the filler layer (4) contains as a source material such as a resin selected from the group consisting of poly vinyl butyral (PVB) resin (paragraph 21).

With respect to claim 8, Umemoto et al. discloses the subassembly of claim 1 above, wherein the plurality of photovoltaic cells (11) is sealed in the filler layer (4) as the cells undergo a lamination process employing a pouching lamination apparatus (paragraph 26 & 27).

In regard to claim 9, Umemoto et al. discloses the subassembly of claim 1 above, wherein the plurality of photovoltaic cells (11) each have a light receiving surface unbonded to the filler layer (4) (paragraph 27).

With respect to claim 10, Umemoto et al. discloses the subassembly of claim 1 above (Figure 4), wherein a conductive wire electrically connecting (9) the plurality of photovoltaic cells (11) and also allowing an external, electrical output (9) is provided in the filler layer (4) and the filler layer (4) has an end provided with an output terminal electrically connected (9) to the conductive wire (paragraph 49).

In regard to claim 11, Umemoto et al. discloses a photovoltaic module with sealed insulating glass comprising as shown in Figure 2: a first plate of glass (21); a second plate of glass (22) arranged opposite the first plate of glass (21); a spacer member (23) forming a space between the first and second plates of glass (21,22); and a photovoltaic module subassembly (11) arranged in the space formed by the spacer member (23), the subassembly including a plurality of photovoltaic cells (11) arranged in an array and electrically interconnected (9) as shown in Figure 4, a translucent, first plate member (5) of resin adjacent to a light receiving surface of the plurality of photovoltaic cells (11), a second plate member (5) of resin adjacent to a non-light receiving surface of the plurality of photovoltaic cells (11), and a translucent filler layer (4) located between the first and second plate members (5) of resin to seal the plurality of photovoltaic cells (11).

With respect to claim 12, Umemoto et al. discloses the module of claim 11 above as shown in Figure 2, wherein the subassembly is arranged to cooperate with at least one of the first (21) and second (22) plates of glass to form an air layer/fixed space between the subassembly (11) and the at least one of the first (21) and second (22) plate of glass (paragraph 52).

In regard to claim 13, Umemoto et al. discloses the module of claim 11 above as shown in Figure 2, wherein the spacer member has butyl rubber attached thereto and the spacer member (23) is fitted between the first (21) and second (22) plates of glass at their respective ends to pose the butyl rubber (31) between the spacer member (23) and the first (21) and second (22) plates of glass and silicone resin is applied and allowed to set outer than the spacer member (23) between the first (21) and second (22) plates' respective ends to allow the space to be watertight/waterproof (paragraph 43).

With respect to claim 14, Umemoto et al. discloses the module of claim 11 above, wherein the subassembly is detachably attached to a frame (2) formed of the first (21) and second (22) plates of glass and the spacer member (23) (Figure 3).

In regard to claim 15, Umemoto et al. discloses the module of claim 14 above as shown in Figure 3, wherein the spacer member (23) is provided with a guide rail to slide into the holding/building envelope (2A) the subassembly to detachably attach the subassembly to the frame (2) (paragraph 51).

With respect to claim 16, Umemoto et al. discloses the module of claim 11 above, wherein the first (21) and second (22) plates of glass are of different types or a single type selected from the group consisting of tempered glass, and wired glass (paragraph 13).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Umemoto et al. (JP2001-213915) in view of Yaba et al. (5,059,254).

With respect to claim 5, Umemoto et al. discloses the subassembly of a photovoltaic module according to claim 4 above, but fails to disclose wherein at least one of the first and second plate members/interlayer (5) of resin is colored and transparent.

Yaba et al. discloses a photovoltaic module (Figure 5) with a colored polyvinyl butyral layer (4) and further teaches that it is preferable that interlayer is a colored polyvinyl butyral and transmits the visible light in ranges from 5 to 60% (col.7; lines: 40-43). Yaba et al. further teaches that if the light transmittance is higher than 60% it is difficult to reduce the glare from the back electrode and/or grid electrode of a solar cell, and if the transmittance is less than 5% then the visibility is greatly reduced (col.7; lines: 42-52). It would have been obvious to one of ordinary skill in the art at the time of the invention to utilize the colored polyvinyl butyral resin interlayer of Yaba et al. to the subassembly of the photovoltaic device of Umemoto et al. in order to achieve from 5-60% visible light transmittance otherwise if the transmittance is higher than 60% it may be difficult to reduce the glare from the back electrode of the solar cell/photovoltaic module and if the transmittance is less than 5% then the visibility is greatly reduced.

Response to Arguments

5. Applicant's arguments filed November 21, 2007 have been fully considered but they are not persuasive.

The Applicant argues that the present invention provides a photovoltaic module subassembly 20 having its front and rear surfaces sandwiched by a pair of plate members which is different from the features of JP2001-213915 that discloses a solar cell module subassembly having its front and rear surfaces sandwiched by a pair of weather proofed transparent film.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., according to the applicant's specification the plate members are rigid and also adequately flexible and to provide support and maintain the geometry of the subassembly after it is fabricated) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Asha Hall whose telephone number is 571-272-9812. The examiner can normally be reached on Monday-Friday 7:30-5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alexa Neckel can be reached on 571-272-1446. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO

Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

AJH
/A. H./
Examiner, Art Unit 1795

/Alexa D. Neckel/

Supervisory Patent Examiner, Art Unit 1795